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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/599,983

03/17/2008

Chris Maeding

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7055 7590 09/13/2010
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EXAMINER

WONGWIAN, PHUTTHIWAT

ART UNIT

PAPER NUMBER

3741

NOTIFICATION DATE

DELIVERY MODE

09/13/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/599,983	Applicant(s) MAEDING, CHRIS	
	Examiner PHUTTHIWAT WONGWIAN	Art Unit 3741	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>09/20/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This office action is responsive to the preliminary amendment filed on 09/20/2007 and the response to the election restriction filed on 07/26/2010. Claims 1-5 have been canceled, claims 6-25 have been added and accordingly claims 6-25 are currently pending in this application.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 10 2004 018 725.8, filed on 04/17/2004.

Election/Restrictions

3. Applicant's election with traverse of Figure 1, claims 6-17, 21, 22, 24 and 25 in the reply filed on 07/26/2010 is acknowledged. The traversal is on the ground(s) that the Examiner did not properly set forth and apply the Unity of Invention standard pursuant to PCT Rule 13.1". This found persuasive, the restriction has been withdrawn.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 6-12, 16 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Regarding claim 1, the phrase "a vibration-damping manner" renders the claim indefinite because it is unclear of which structure corresponds to "a vibration-damping manner". Appropriate correction is required.

7. As to claim 16, the limitation "the opening" is unclear of which opening, since claim 13 recited two openings. Appropriate correction is required.

8. As to claim 20, the limitation "a plurality of sleeves at least one of " does not make grammatical sense and should be changed to "a plurality of sleeves, at least one of the flow sleeve".

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

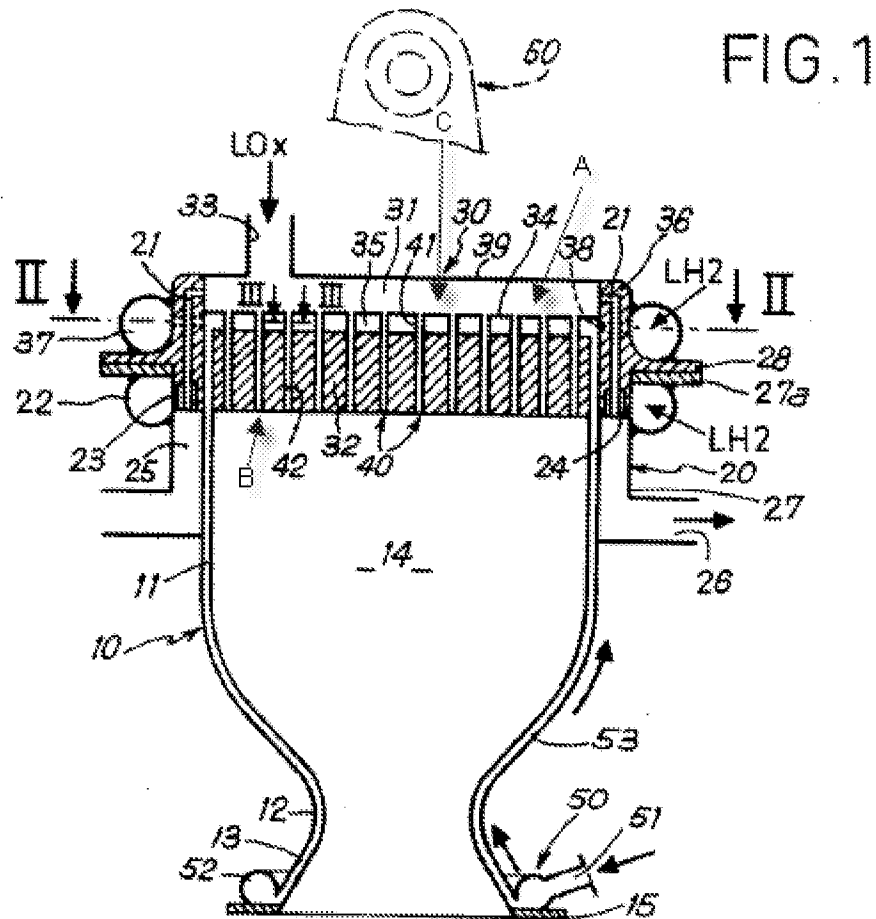
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 6-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Vuillamy (US Patent No. 5, 404, 715).

11. As to claim 6, Vuillamy discloses a device (fig. 1) for [intended use] damping oscillations of a combustion chamber comprising: at least one resonator 132 or 136 (fig. 4) connected to a pre-chamber 31 (fig. 1) in a vibration-damping manner (fig. 1),

wherein the pre-chamber is connected to a combustion chamber 14 (fig. 1) in a vibration-damping manner (fig. 1) via at least one passage channel 40 (fig. 1, the channel of 40).



12. As to claims 7-13, Vuillamy discloses the combustion chamber 14 (fig. 1) adjoins an injection head A (fig. 1 above) having at least one injection element 40 (fig. 1), wherein the injection head conducts a fuel flow (col. 7, line 16-20, "a coaxial injector 40 may comprise an outer tube 42 co-operating with an inner tube 41 to define an annular fuel feed channel") into the combustion chamber 14 (fig. 1), wherein the pre-chamber 31 (fig. 1) is arranged upstream of the at least one injection element 40 (fig. 1), wherein

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the pre-chamber 31 (fig. 1) is arranged in an area of the at least one injection element 34 (fig. 1), wherein the pre-chamber 31 (fig. 1) is in fluid connection with a fuel flow col. 7, line 16-20, "a coaxial injector 40 may comprise an outer tube 42 co-operating with an inner tube 41 to define an annular fuel feed channel"), wherein the at least one passage channel 40 (fig. 1, the channel of 40) is part of an injection element 34 (fig. 1) and wherein the combustion chamber 14 (fig. 1) is part of a rocket engine (abstract line 1-2, "The rocket engine").

13. As to claim 14, Vuillamy discloses a system (fig. 1) for [intended use] damping oscillations, the system comprising: a combustion chamber 14 (fig. 1); an injection head A (fig. 1 above) arranged upstream of the combustion chamber 14 (fig. 1); a pre-chamber 31 (fig. 1) arranged upstream of the injection head A (fig. 1 above); and at least one resonator structured 40 (fig. 1) and arranged to dampen vibrations of the combustion chamber (fig. 1 above) and comprising one of: an opening 40 (fig. 1, the opening of one of the flow channel 40) communicating with the pre-chamber 31 (fig. 1); and an opening with an open area of the injection head.

14. As to claims 15-24, Vuillamy discloses the combustion chamber comprises an outlet B (fig. 1 above) arranged opposite the injection head A (fig. 1 above), wherein the opening 40 (fig. 1, the opening of one of the flow channel 40) communicating with the pre-chamber comprises a circumferential opening 40 (fig. 2-3), wherein the at least one resonator 40 (fig. 3) is annular shaped (fig. 3), wherein the at least one resonator comprises a sleeve 36 (fig. 1) which extends into the open area of the injection head A (fig. 1 above), wherein the at least one resonator comprises a sleeve 36 (fig. 10)

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oriented along a direction C (fig. 1 above) of gas flow and which extends into the open area (fig. 1, the opening of 40) of the injection head A (fig. 1 above), wherein the at least one resonator comprises a plurality of sleeves 36, 38 (fig. 1) at least one of oriented along a direction of gas flow C (fig. 1 above) and extending into the open area of the injection head (fig. 1, the opening of 40), wherein the at least one resonator comprises a radially oriented opening (fig. 1, the opening of 40) communicating with the pre chamber 31 (fig. 1), wherein the at least one resonator comprises a plurality of radially oriented openings 40 (fig. 1, plurality of 40) communicating with the pre-chamber 31 (fig. 1), wherein the at least one resonator comprises a radially oriented opening 40 (fig. 1, plurality of 40) communicating with the open area of the injection head A (fig. 1 above) and wherein the at least one resonator is one of: integrally formed in a side wall 38 (fig. 1) of the pre-chamber 31 (fig. 1); integrally formed in an end wall of the pre-chamber; and integrally formed in a side wall of the injection head.

15. As to claim 25, Vuillamy discloses a system (fig. 1) for [intended use] damping oscillations of a rocket engine, the system comprising: a combustion chamber 14 (fig. 1); an injection head A (fig. 1 above) arranged upstream of the combustion chamber; a pre-chamber 31 (fig. 1) arranged upstream of the injection head A (fig. 1 above); and at least one resonator structured 40 (fig. 1) and arranged to dampen vibrations of the combustion chamber and comprising one of: an opening (fig. 1, the opening of 40) communicating with the pre-chamber 31 (fig. 1); and an opening (fig. 1, the opening of 40) communicating with an open area of the injection head.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUTTHIWAT WONGWIAN whose telephone number is 571-270-5426. The examiner can normally be reached on Monday - Thursday, 7:30am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MICHAEL A. CUFF can be reached on 571-272-6778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. W./
Examiner, Art Unit 3741

/William H. Rodríguez/
Primary Examiner, Art Unit 3741